

ABSTRACT OF THE DISCLOSURE

The present invention is a thermally reversible stimulus-sensitive gel or gelling copolymer radioisotope carrier that is a linear random copolymer of an [meth-  
5 ]acrylamide derivative and a hydrophilic comonomer, wherein the linear random copolymer is in the form of a plurality of linear chains having a plurality of molecular weights greater than or equal to a minimum gelling molecular weight  
10 cutoff. Addition of a biodegradable backbone and/or a therapeutic agent imparts further utility. The method of the present invention for making a thermally reversible stimulus-sensitive gelling copolymer radionuclide carrier has the steps of: (a) mixing a stimulus-sensitive reversible  
15 gelling copolymer with an aqueous solvent as a stimulus-sensitive reversible gelling solution; and (b) mixing a radioisotope with said stimulus-sensitive reversible gelling solution as said radioisotope carrier. The gel is enhanced by either combining it with a biodegradable backbone and/or  
20 a therapeutic agent in a gelling solution made by mixing the copolymer with an aqueous solvent.